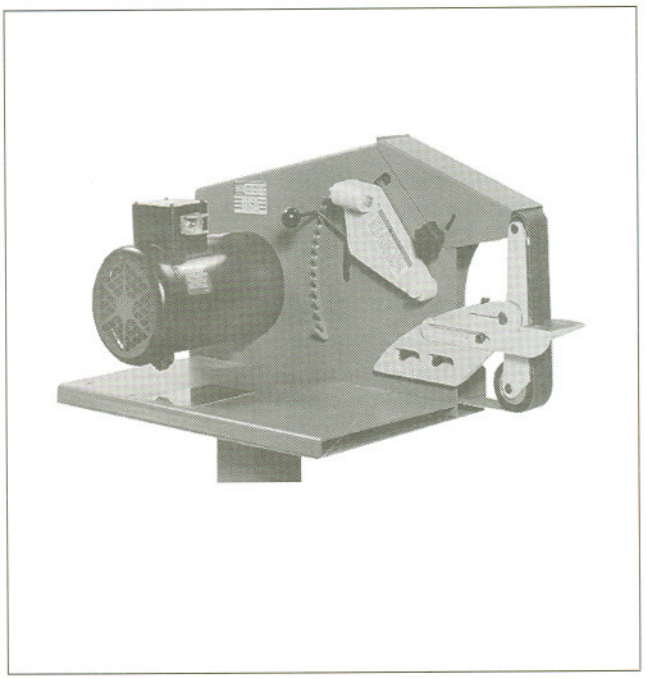
General Specifications

The Wilton Square Wheel Belt Grinder, Models 4103, 4106 and 4126AC, are designed for grinding, deburring, chamfering, and internal/external grinding of small and large parts. The Square Wheel Belt Grinder can be used to polish or buff finished parts and grind small internal radii using available accessories. Accessory changeover is quick and easy. Belt tension and tracking are easily adjustable.

The Square Wheel Belt Grinder is available in either single speed (Models 4103 and 4106) or variable speed model (Model 4126AC). The variable speed model is controlled by an inverter that provides belt speeds ranging from 0 to 6000 SFPM.



Specifications	Model 4103	Model 4106	Model 4126AC
Belt Width & Length	2 x 72 Inches	2 x 72 Inches	2 x 72 inches
Belt Speed	4600 SFPM	4600 SFPM	0 - 6000 SFPM
Motor	1 HP, Single Phase, 1750 rpm	2 HP, Three Phase, 1750 rpm	1 HP, 1,750 rpm
Contact Wheel Diameters	1-1/2, 3, & 8 inches	1-1/2, 3, & 8 inches	1-1/2, 3, & 8 inches
Weight	115-125 pounds	120 pounds	120 pounds

⚠ WARNING

- Misuse of this machine can cause serious injury.
- For safety, machine must be set up, used and serviced properly.
- Read, understand and follow instructions in the operator's and parts manual which was shipped with your machine.

When setting up machine:

- Always avoid using machine in damp or poorly lighted work areas.
- Always be sure machine is securely anchored to the floor.
- Always keep machine guards in place.
- Always put start switch in OFF position before plugging in machine.

When using machine:

- Never operate with machine guards missing.
- Always wear safety glasses with side shields (See ANSI Z87.1)
- Never wear loose clothing or jewelry.
- Never overreach — you may slip and fall into the machine.
- Never leave machine running while you are away from it.
- Always shut off the machine when not in use.

When servicing machine:

- Always unplug machine from electrical power while servicing.
- Always follow instructions in operators and parts manual when changing accessory tools or parts.
- Never modify the machine without consulting Wilton Corporation.

You — the stationary power tool user— hold the key to safety.

Read and follow these simple rules for best results and full benefits from your machine. Used properly, Wilton's machinery is among the best in design and safety. However, any machine used improperly can be rendered inefficient and unsafe. It is absolutely mandatory that those who use our products be properly trained in how to use them correctly. They should read and understand the Operators and Parts Manual as well as all labels affixed to the machine. Failure in following all of these warnings can cause serious injuries.

Machinery general safety warnings

1. Always wear protective eye wear when operating machinery. Eye wear shall be impact resistant, protective safety glasses with side shields which comply with ANSI Z87.1 specifications. Use of eye wear which does not comply with ANSI Z87.1 specifications could result in severe injury from breakage of eye protection.
2. Wear proper apparel. No loose clothing or jewelry which can get caught in moving parts. Rubber soled footwear is recommended for best footing.
3. Do not overreach. Failure to maintain proper working position can cause you to fall into the machine or cause your clothing to get caught pulling you into the machine.
4. Keep guards in place and in proper working order. Do not operate the machine with guards removed.
5. Avoid dangerous working environments. Do not use stationary machine tools in wet or damp locations. Keep work areas clean and well lit.
6. Avoid accidental starts by being sure the start switch is OFF before plugging in the machine.
7. Never leave the machine running while unattended. Machine shall be shut off whenever it is not in operation.
8. Disconnect electrical power before servicing. Whenever changing accessories or general maintenance is done on the machine, electrical power to the machine must be disconnected before work is done.
9. Maintain all machine tools with care. Follow all maintenance instructions for lubricating and the changing of accessories. No attempt shall be made to modify or have makeshift repairs done to the machine. This not only voids the warranty but also renders the machine unsafe.
10. Machinery must be anchored to the floor.
11. Secure work. Use clamps or a vise to hold work, when practical. It is safer than using your hands and it frees both hands to operate the machine.
12. Never brush away chips while the machine is in operation.
13. Keep work area clean. Cluttered areas invite accidents.
14. Remove adjusting keys and wrenches before turning machine on.
15. Use the right tool. Don't force a tool or attachment to do a job it was not designed for.
16. Use only recommended accessories and follow manufacturers instructions pertaining to them.

17. Keep hands in sight and clear of all moving parts and cutting surfaces.
18. All visitors should be kept at a safe distance from the work area. Make workshop completely safe by using padlocks, master switches, or by removing starter keys.
19. Know the tool you are using—its application, limitations, and potential hazards.

General Electrical Cautions

This machine should be grounded in accordance with the National Electrical Code and local codes and ordinances. This work should be done by a qualified electrician. The machine should be grounded to protect the user from electrical shock.

Wire sizes

Caution: for circuits which are far away from the electrical service box, the wire size must be increased in order to deliver ample voltage to the motor. To minimize power losses and to prevent motor overheating and burnout, the use of wire sizes for branch circuits or electrical extension cords according to the following table is recommended:

Conductor Length	AWG (American wire gauge) Number	
	240 Volt Lines	120 Volt Lines
0 - 50 Feet	No. 14	No. 14
50 - 100 Feet	No. 14	No. 12
Over 100 Feet	No. 14	No. 8

Safety requirements for abrasive grinding machines

Abrasive grinding can be hazardous to operators and bystanders. Grinding sparks, chips and dust particles thrown off by the grinding disc can cause serious injury by contact or inhalation. To avoid such injuries you must comply with the following safety requirements:

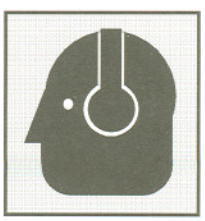
1. Always wear protective eyewear when operating machinery. Eye wear shall be impact resistant, protective safety glasses with side shields which comply with ANSI Z87.1. Use of eye wear which does not comply with ANSI Z87.1 specifications could result in severe injury from breakage of eye protection. See Figure A, below.
2. Wear leather safety gloves, arm guards, leather aprons and safety shoes.
3. A dust collection system is recommended, Operator shall also wear a dust mask at all times. See Figure B, below.
4. Additional precautions may be necessary for grinding materials which are flammable or have other hazardous properties. You should always consult the manufacturer of such materials for instructions on grinding and handling.
5. Do not force or jamb the workpiece into the grinding disc.
6. Before grinding, always allow the motor to come up to operating speed, then check the grinding disc for wobble, runout, or any unbalanced condition. If the disc is not operating accurately and smoothly, immediately stop the motor and make repairs before attempting any grinding operations.
7. Abrasive discs must be stored in a controlled environment area. Relative humidity should be 35% to 50% and the temperature should be between 60 and 80 degrees Fahrenheit. Failure to do so could cause premature disc failure.
8. Examine the face of the grinding disc carefully. Excessive grinding which wears down to the backing material can tear the disc. Never use a disc which shows backing, nicks or cuts on the surface or edge or damage due to creasing or poor handling.
9. When installing a new disc, be certain the disc is accurately centered on the drive wheel. Failure to do so could cause a serious unbalanced condition.
10. Always present the workpiece to the wheel while resting the workpiece firmly on the table. Failure to do so could result in damage to the workpiece or throwing of the workpiece off the wheel.
11. Safety shoes which comply with ANSI Z41.1 shall be worn. See Figure C.
12. Personal hearing protection such as ear plugs or ear muffs shall be used to protect against the effect of noise exposure. See Figure D:

A

B

C

D



Introduction

This manual includes operating and maintenance instructions for the Wilton Model 4103, 4106 and 4126AC Square Wheel Belt Grinder. The manual also includes parts listings and illustrations of replaceable parts.

Refer to Figures 1 and 2 for key features of the Square Wheel Belt Grinder.

Setup and Operation

The Square Wheel Belt Grinder can be mounted on a workbench or an optional pedestal. The grinder should be secured to the work bench or pedestal using the four holes in the base of the grinder. If the pedestal is used, it in turn should be anchored to the floor using the for holes in the base of the pedestal

Installation of Work Rest

The work rest mounts on the left side of the head casting. Attach the work rest using the socket head cap screw provided with the machine.

The slot in the work rest has a lip against which the cap screw is tightened. Place the hole at the end of the slot over the cap screw. Then slide the rest inward until the work rest is in position in front of the contact wheel. Tighten the cap screw.

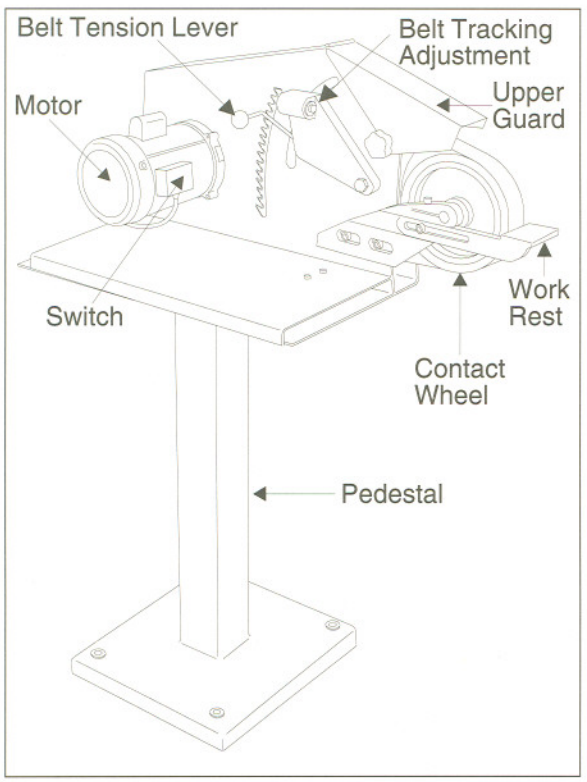


Figure 1: Square Wheel Grinder Features (single speed)

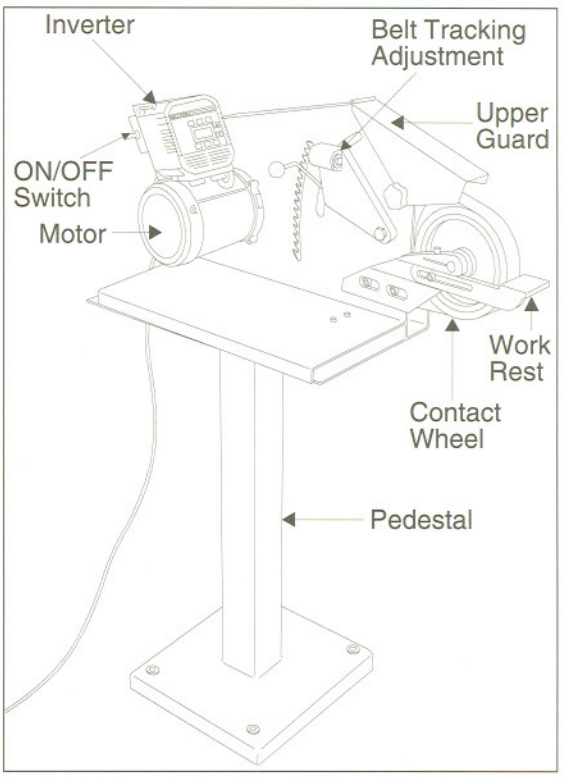


Figure 2: Square Wheel Grinder Features (variable speed)

Vacuum Connection

NOTE: A vacuum system integrated with a grinder stand is available from Wilton.

The grinder uses an adjustable front mounted vacuum scoop. Refer to Fgure 3. Install the vacuum system components as follows:

1. Slide the support bracket into the channel secured to belt grinder base. Install one knob in the belt grinder base to secure the support bracket.
   NOTE: Refer to vacuum scoop exploded view, Figure 11 when installing channel.

2. Slide the scoop onto the support bracket. Install remaining knob in the support bracket to secure the scoop.
3. Connect hose to exhaust duct and secure with a clamp.

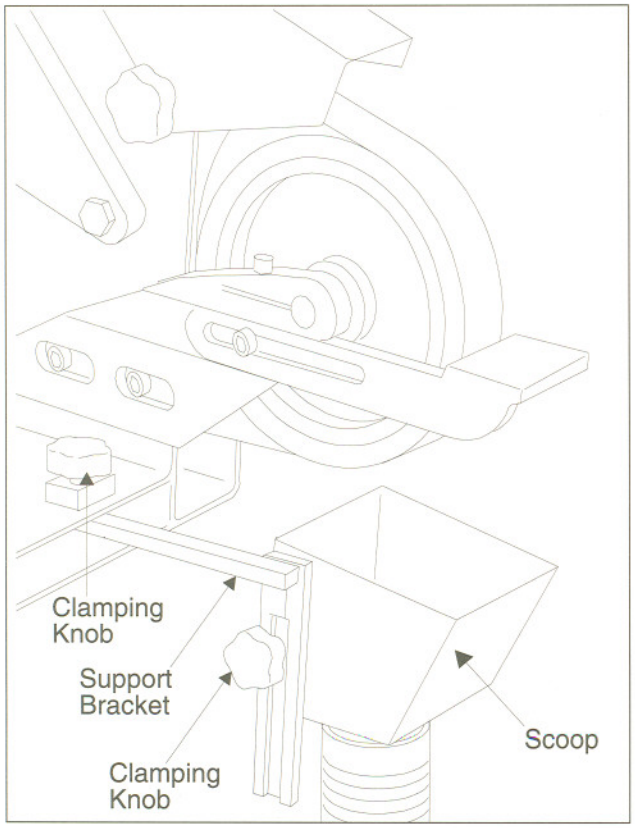


Figure 3: Vacuum Connection

Electrical Connection

Refer to the Wiring Diagram section for wiring information. Connection to electrical power should be made by a qualified electrician. Observe local electrical codes when connecting the machine.

Operating Controls

Model 4103/4106
The ON/OFF switch for the Model 4103/4106 grinder is located in a switch box mounted on the drive motor.

Model 4126AC
NOTE: Refer to Figure 4. Use only the inverter controls defined in the following procedures. The inverter is pre-programmed at the factory and requires no further programming.The controls for the Model 4126AC grinder are located on the inverter. The ON/OFF switch is located on the left side of the inverter. Start the grinder by setting the ON/OFF switch to ON.

Press the FWD RUN pushbutton on the inverter and set the speed using the up/down arrow keys (to the right of the speed display). Press the up arrow to increase speed; press the down arrow to reduce speed. The display on the inverter shows drive motor speed in revolutions per minute. Press the STOP button on the inverter to stop the grinder. Then set the ON/OFF switch to OFF.

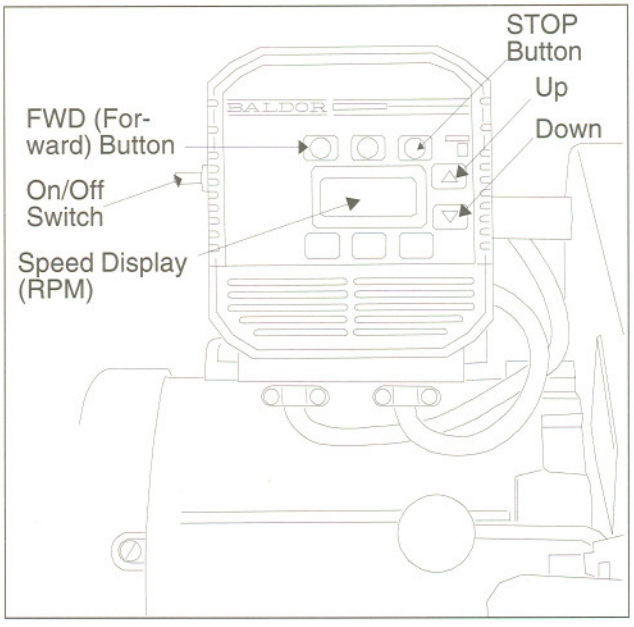
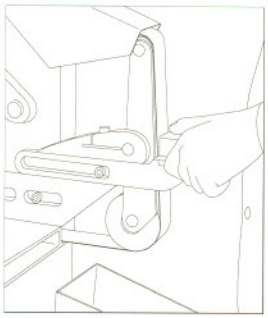
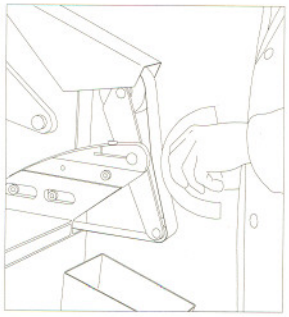


Figure 4: Operating Controls
(Model 4126AC)

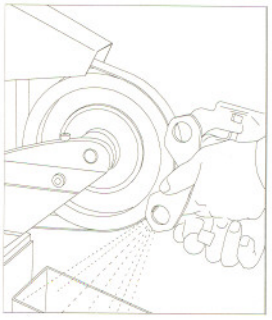
Typical Uses for the Square Wheel Belt Grinder



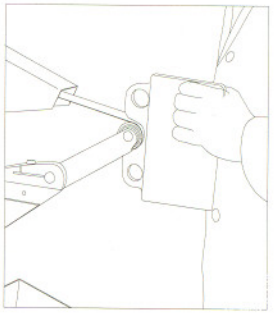
Flat or angular stock — Platen setting is the perfect angle for high speed, precision, flat and level grinding of tools, knives, plastics, and other materials. The platen allows working to very close tolerances. An adjustable work rest is standard on all models.



Shaping — For grinding and finishing cylindrical shapes. The yoke surface conforms to the shape of the surface to produce an even, smooth finish without the danger of scarring. Excellent for tool post applications.

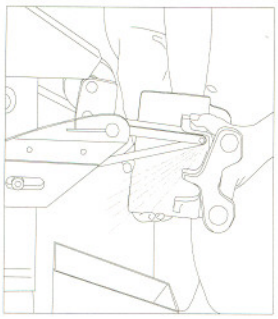


Roughing — Serrated contact wheel is used for removing heavy stock, cleaning up a weld or snagging a casting. This durable 8-inch diameter wheel is used extensively for hollow grinding and profiling knives and other culinary tools. It is standard equipment on all models.

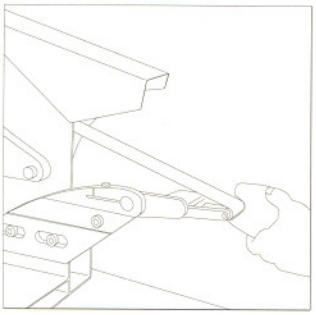


Contouring — Grind difficult, hard to reach areas with the 3-inch by 2-inch or 1-1/2 inch by 2-inch diameter contact wheels. Contours and shapes unique parts like propellers and metal furniture.

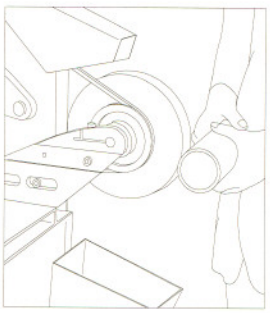
OPTIONAL FEATURES



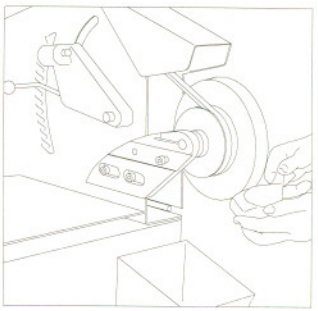
Internal contouring — The air-cushioned dead head is for use on very small radius grinding. When connected to a source of shop air (80-90 psi), the belt rides on a cushion of air to decrease head and belt wear. The dead head is easy to use, and adapts to any of the available radius tips.



Internal contouring with small wheel — This small wheel accessory is designed for hard to reach places. Includes 5/8-inch, 70 durometer contact wheel. Available contact wheels are 1/2-inch, 3/4-inch, and 1-inch.



Polishing — The buffing pad is perfect for satin finish or high gloss polishing. The fine, close stitched burring pads are ideal for metal and plastic



Finishing — The nylon reinforced, silicone carbide wheel is perfect for polishing and deburring. It applies a high luster finish on rough surfaces and is excellent for steel, iron, or aluminum.

Maintenance

Cleaning

Shutoff the machine before cleaning. Keep the exterior of the machine clean and free of chips. Use a brush for cleaning. Periodically empty grinding dust and particles from the dust collection system.

Lubrication

Lubrication of the grinder is not required. The drive motor and contact wheel are fitted with sealed bearings.

Replacement of Contact Wheel

WARNING: BE SURE TO SET ON/OFF SWITCH TO OFF TO AVOID PERSONAL INJURY.

1. Refer to Figure 5. Lower the tension lever to release belt tension.
2. Loosen upper guard knob and swing guard back for clearance.
3. Loosen the contact wheel shaft clamping screw on the head casting.
4. Remove the contact wheel assembly.
5. Remove retaining rings from wheel shaft.
6. Remove shaft and wheel bearings.
7. Install bearings in replacement contact wheel.
8. Install shaft and secure with retaining rings.
9. Install contact wheel shaft in head casting.
10. Tighten clamping screw.
11. Lift tension lever to set belt tension.
12. Lower and adjust position of upper guard. Tighten the upper guard knob.

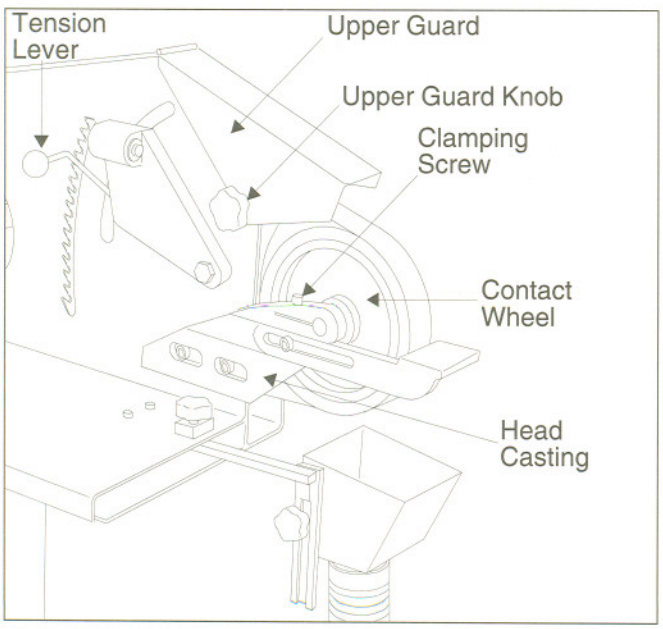


Figure 5: Replacement of Contact Wheel

Installation of Platen

WARNING: BE SURE TO SET ON/OFF SWITCH OFF TO AVOID PERSONAL INJURY.

1. Refer to Figure 6. Lower the tension lever to release belt tension.
2. Loosen upper guard knob and swing guard back for clearance.
3. Loosen the contact wheel shaft clamping screw on the head casting.
4. Remove contact wheel (see Replacement of Contact Wheel).
5. Install pivot shaft of platen in head casting. Position platen as desired.
   A. For grinding flat or angular work pieces, position the platen with the platen surface facing outward.
   B. For grinding of cylindrical work pieces, position the platen with the "yoke" side facing outward.
   C. Set at desired angle.
6. Tighten clamping screw.
7. Lift tension lever to set belt tension.
8. Lower and adjust position of upper guard. Tighten the upper guard knob.

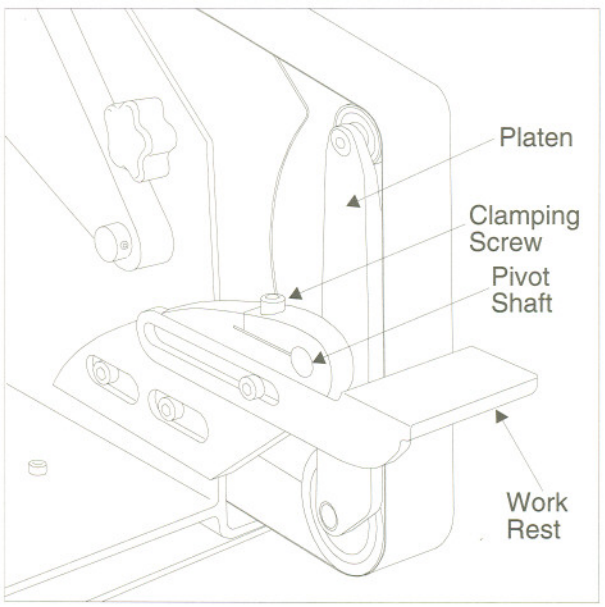


Figure 6: Installation of Platen

Replacement of Grinding Belt

WARNING: DO NOT OPERATE THE MACHINE WITH THE SIDE PANEL OPEN. DISCONNECT ELECTRICAL POWER TO THE MACHINE BEFORE PERFORMING ANY MAINTENANCE.

1. Refer to Figure 7. Lower the belt tension lever to release tension on the belt.
2. Loosen the knob on the left side of the machine and raise upper guard. Turn the knob on the side panel and lower the side panel.
3. If required, loosen work rest to provide clearance for belt removal.
4. Remove the belt from the drive wheel, idler wheel, and contact wheel. Install the replacement belt over the drive wheel, idler wheel, and contact wheel.
5. Raise the belt tension lever to tighten the belt against the wheels. Tighten the belt until it is just taut. A moderate tension will provide faster cutting, longer belt life, and better tracking. Do not over-tension the belt.
6. Check belt tracking by spinning the drive wheel by hand. Adjust tracking if required. (Refer to Checking Belt Tracking.)

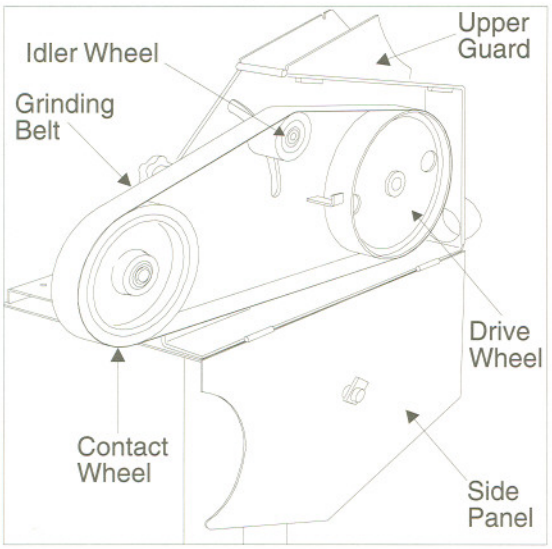


Figure 7: Replacement of Grinding Belt

Belt Tracking

WARNING: DO NOT OPERATE THE MACHINE WITH THE SIDE PANEL OPEN. DISCONNECT ELECTRICAL POWER TO THE MACHINE BEFORE PERFORMING ANY MAINTENANCE.

1. Loosen the knob on the left side of the machine and raise upper guard. Turn the knob on the side panel and lower the side panel.
2. Spin the drive wheel by hand and check tracking of the belt. If the belt tracks either right or left, adjustment is required.
3. Use an Allen wrench to change the alignment of the idler wheel. Turn the idler adjustment screw clockwise to cause the belt to track right. Turn the idler adjustment screw counterclockwise to cause the belt to track left.
4. Close side panel and secure by turning the knob on the panel. Lower the upper belt guard and secure with the knob on the left side of the grinder.
5. Connect electrical power and start the grinder. Check belt tracking (the belt should be centered on the contact wheel.
6. If required, adjust belt tracking to center the belt on the contact wheel. Turn the idler adjustment screw clockwise to move the belt to the right. Turn the idler adjustment screw counterclockwise to move the belt to the left.
   NOTE: Do not turn tracking adjustment screw beyond its limits or the adjustment mechanism will be damaged.
7. If the belt does not track properly, increase belt tension. Repeat steps 1 through 6.

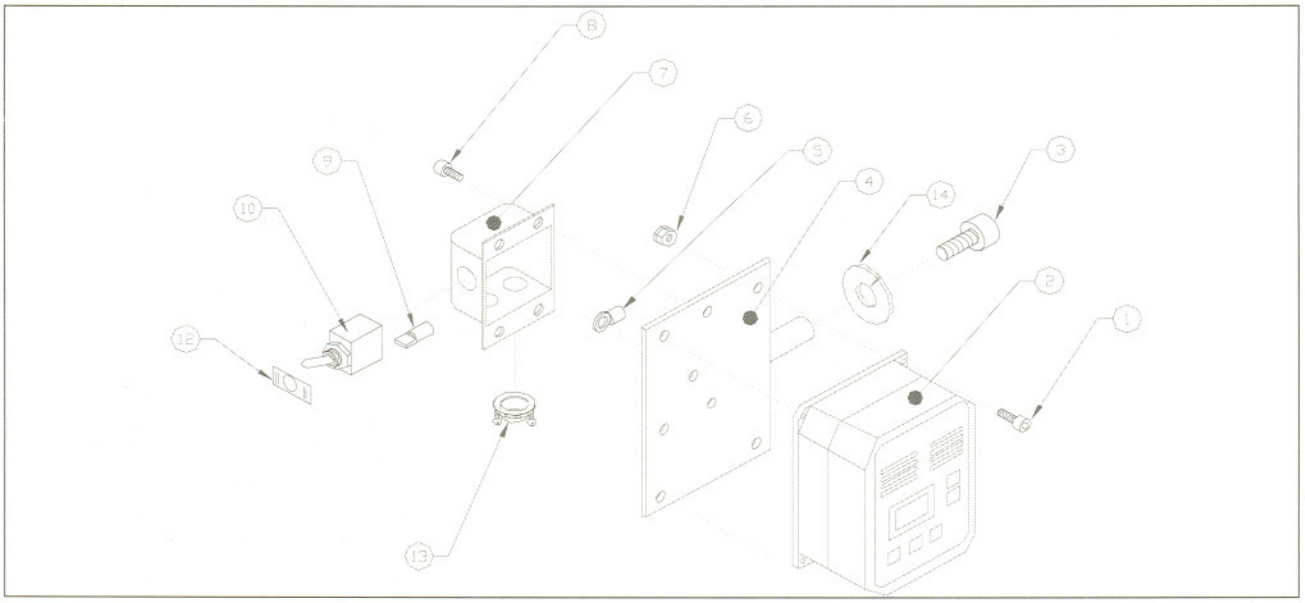
Replacement of Inverter

(Refer to Figure 8)

WARNING: DISCONNECT ELECTRICAL POWER TO THE MACHINE BEFORE PERFORMING ANY MAINTENANCE.

1. Disconnect electrical power.
2. Remove access panel on front of inverter. Disconnect inverter wiring.
3. Remove four screws (1) and four nuts (6) from inverter (2). Separate inverter (2) from mount (4).
4. Install replacement inverter (2) and secure with four screws (1) and four nuts (6).
5. Connect electrical wiring (refer to Wiring Diagram section for connections).
6. Start belt grinder and check for proper operation.

NOTE: Inverter is pre-programmed at the factory, further programming is not required.



Ref. No.	Part Number	Description	Qty.
1	5550874	Screw, Socket head Cap, 10-32NF x 3/8	4
2	5507817	Inverter (1-phase, 120V, 50/60 Hertz)	1
	5507818	Inverter (1or 3-phase, 220V, 50/60 Hertz)	
	5511447	Inverter (3-phase, 440V, 50/60 Hertz)	
3	9129921	Screw, Socket Head Cap, 1/2-13 x 1	1
4	5507932	Mount, Inverter	1
5	9119481	Terminal, Full Closed	1

Ref. No.	Part Number	Description	Qty.
6	5508073	Nut, Lock, 10-32 Nylock	4
7	5507934	Box, Switch	1
8	9052271	Screw, Socket Head Cap 10-32NF x 3/8	5
9	9119721	Spade, Female 16-14 AWG	4
10	7117401	Switch, Toggle	1
11	----------		
12	9085061	Dial, ON-OFF	1
13	9119071	Grip, Cord	2
14	5628371	Lock Washer, 1/2	1

Figure 8: Replacement of Inverter and Switch

Replacement of Switch

WARNING: DISCONNECT ELECTRICAL POWER TO THE MACHINE BEFORE PERFORMING ANY MAINTENANCE.

1. Refer to Figure 8. Disconnect electrical power.
2. Remove screws securing switch box. Lift away switch box to gain access to switch terminals.
3. Disconnect wiring from terminals on switch.
4. Remove nut from switch. Install replacement switch and and secure with nut (provided with switch). Connect electrical wiring (refer to Wiring Diagram section for connections).
5. Install switch box and secure with screws.
6. Start belt grinder and check for proper operation.

Troubleshooting

Problem	Probable Cause	Suggested Remedy
Poor Tracking	1. Improper belt splice. 2. Excessive belt tension. 3. Insufficient belt tension. 4. Worn contact surfaces. 5. Misaligned contact surfaces. 6. Lack of crown on drive wheel. 7. Worn bearings.	1. Check belt for irregular seam or shape. 2. Set tension so belt is just taut. 3. Set tension so belt is just taut. 4. Check elastomer on contact wheels. Replace worn wheels. 5. Check alignment of drive wheel and contact wheels. The drive pulley and contact wheel must be aligned. To adjust drive wheel, loosen set screws and move drive wheel in or out on motor shaft as required. To adjust contact wheel, loosen shaft clamping screw and move contact wheel in or out as required. 6. Check for 1/16-inch crown. Replace drive wheel if crown is not present. 7. Check all bearings for overheating or damage. Replace worn or damaged bearings.
Slack Belt	1. Insufficient belt tension.	1. Set tension so belt is just taut.
Contact Wheel Wear	1. Excessive belt tension. 2. Grinding in one area on belt. 3. Excessive grinding deposits on belt and debris in machine.	1. Set tension so belt is just taut. 2. Use entire work surface of belt when ever possible. 3. Periodically clean interior of grinder.
Short Belt Life	1. Excessive grinding pressure.	1. Allow the belt to do the cutting. Excessive pressure dulls the belt and removes the grit from the belt.

Replacement Parts

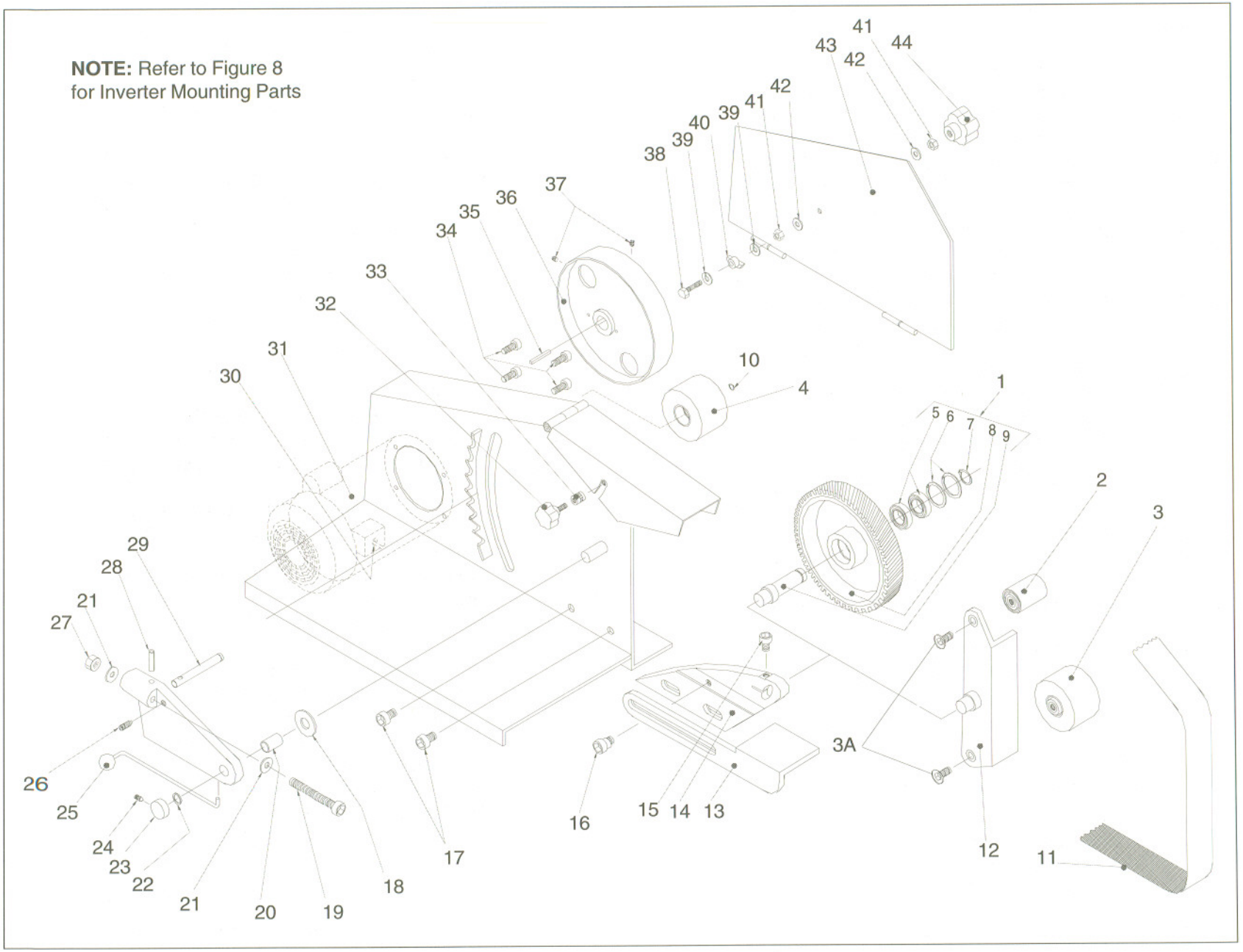
This section provides exploded view illustrations that show the replacement parts for the Wilton Models 4103, 4106 and 4126AC Square Wheel Belt Grinder. Also provided are parts listings that show part number, description and quantity. The item numbers on the illustration relate to the item number in the facing page of the parts listing.

Order replacement parts from:

Wilton Corporation
300 South Hicks Road
Palatine, IL 60067
847/934-6000
FAX: 847/934-7813 or 1-800-626-9676

Identify the replacement part by the part number shown in the parts listing. Be sure to include the model number and serial number of your machine when ordering replacement parts to assure that you will receive the correct part.

Square Wheel Belt Grinder – Exploded View



Ref. No.	Part Number	Description	Qty.
1	5507530	Contact Wheel Assembly, 8 x 2 Sertd, 90 D (Standard)	1
	5510942	Contact Wheel Assembly, 8 x 2 Serrated, 50 Duro	
	5510943	Contact Wheel Assembly, 8 x 2 Smooth, 50 Duro	
	5510944	Contact Wheel Assembly, 10 x 2 Serrated, 90 Duro	
2	5044590	Contact Wheel Assembly, 1.5 x 2 Smooth, 90 Duro	1
3	5044610	Contact Wheel Assembly, 3 x 2 Serrated, 90 Duro	1
3A	9049821	Screw, Flat Head Cap	2
4	5507582	Idler Wheel	1
5	9100331	Bearing	2
6	9074011	Retaining Ring, Internal	2
7	9074081	Retaining Ring, External	2
8	5053221	Contact Wheel, 8 x 2 Sertd, 90 D (Standard)	1
	5510946	Contact Wheel, 8 x 2 Serrated, 50 Duro	
	5510947	Contact Wheel, 8 x 2 Smooth, 50 Duro	
	5510948	Contact Wheel, 10 x 2 Serrated, 90 Duro	
9	5053231	Shaft, 8 x 10 Wheel	1
10	9074381	Retaining Ring, External	1
11	9112811	Abrasive Belt, 2 x 72, 50 grit	1
		Optional Grit Abrasive Belts (10 piece minimum order)	
	9112801	2"X72" 36 Grit - Abrsv Belt	
	9112911	2"X72" 60 Grit - Abrsv Belt	
	9112821	2"X 72" 80 Grit - Abrsv Belt	

(Abrasive Belts - Continued in right column)

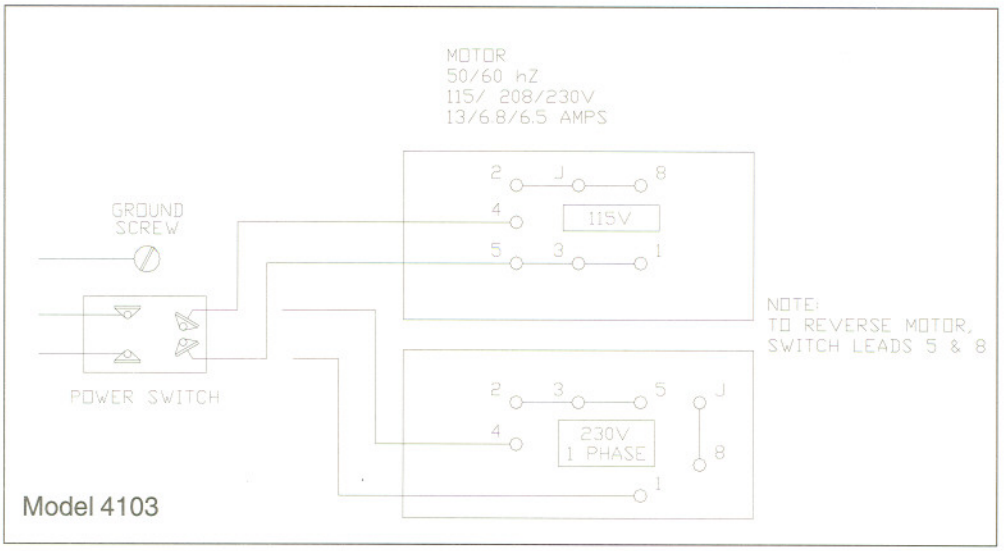
Ref. No.	Part Number	Description	Qty.
		Optional Grit Abrasive Belts (Continued from left column) (10 piece minimum order)	
	9112831	2" X 72" 120 Grit - Abrsv Belt	
	9112921	2"X 72" 180 Grit - Abrsv Belt	
	9112931	2"X 72" 220 Grit - Abrsv Belt	
	9112941	2"X 72" 320 Grit - Abrsv Belt	
12	5044400	Platen Casting	1
13	5044410	Work Rest Casting	1
14	5044370	Head Casting	1
15	9128441	Screw, Socket Head Cap 3/8-16 x 1	1
16	5049990	Screw, Work Rest	1
17	9129881	Screw, Socket Head Cap 3/8-16 x 5/8	2
18	9055361	Flat Washer, Nylon 1/2 I.D. x 1 O.D.	1
19	9129861	Screw, Socket Head Cap, Full Thread, 3/8-24 x 3	1
20	5046571	Bearing, Idler Housing	1
21	9055381	Flat Washer, Nylon, 3/8	2
22	9010271	O-Ring, 1/2	1
23	5044651	Cap, Idler Housing Pin	1
24	9133041	Set Screw, Socket Head 1/4-20 x 1/4	1
25	5046560	Lever, Tension	1
26	9133191	Set Screw, Nylon Tipped 5/16-18 x 3/4	1
27	9129561	Locknut, Hex, 3/8-24	1
28	9059811	Roll Pin, 3/16 x 1-1/2	1
29	5053301	Shaft, Idler Pulley	1
30	5541241	Switch (Model 4103 only)	1
	5644231	Manual Motor Starter (Model 4106 only)	

(Parts List - Continued Next Page)

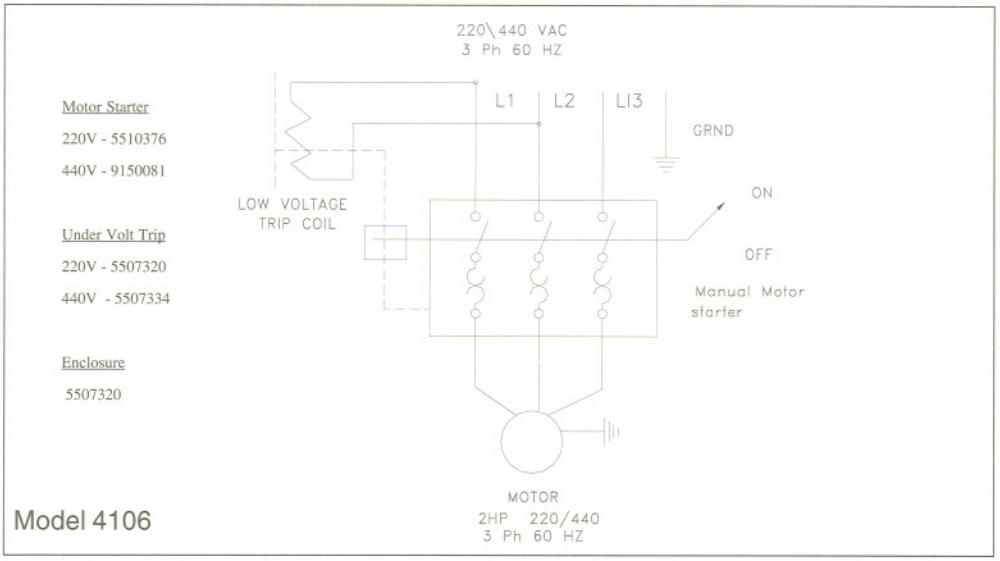
(Parts List - Continued From Previous Page)

Ref. No.	Part Number	Description	Qty.
31	9066821	Motor & Switch, 1 HP, Single Phase (Model 4103)	1
	9066831	Motor, 2 HP, 3 Phase (Model 4106)	
	5508076	Motor, 1 HP, 3-Phase (Model 4126AC only)	
32	9070361	Knob, Hand	1
33	9070781	Nut, Allen, 5/16-18	1
34	9128671	Bolt, Hex Head, w/Nylock 3/8-16 x 3/4	4
35	9114320	Key, 3/16 x 3/16 x 1-1/4	1
36	5044511	Pulley, Drive	1
37	9054541	Set Screw, Socket Head 5/16-18 x 1/2	2
38	5630451	Screw, Socket Head Hex 5/16-18 x 1-1/2	1
39	5077041	Lock Washer, 5/16	2
40	9070381	Latch, Cam	1
41	5630061	Nut, Hex, 5/16-18	1
42	5507583	Washer, Nylon 5/16	2
43	5055311	Door	1
44	9070371	Knob, Hand	1
45	5507584	Guard	1
46	9057461	Washer, Flat 0.26 x 0.63 x 0.06	1

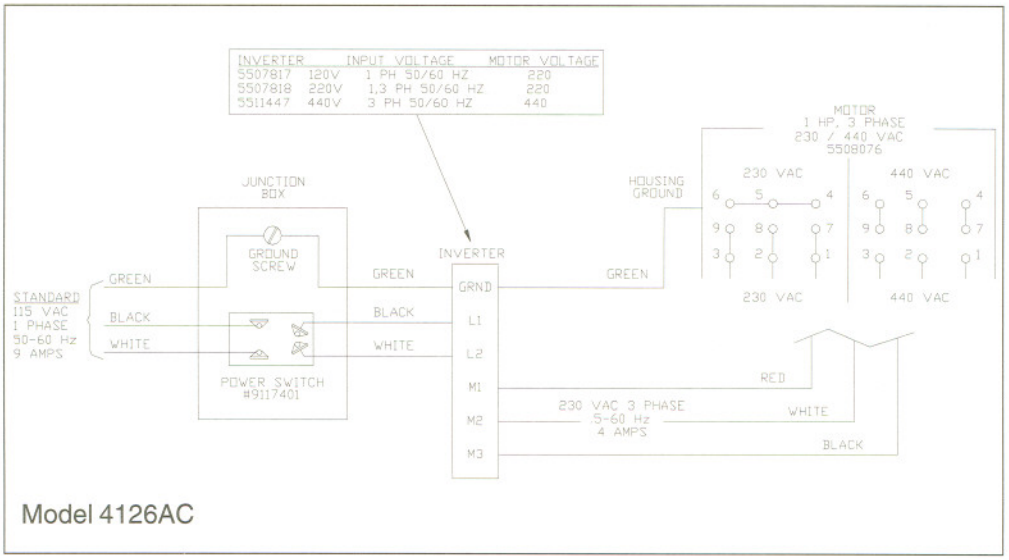
Wiring Diagrams



Model 4103



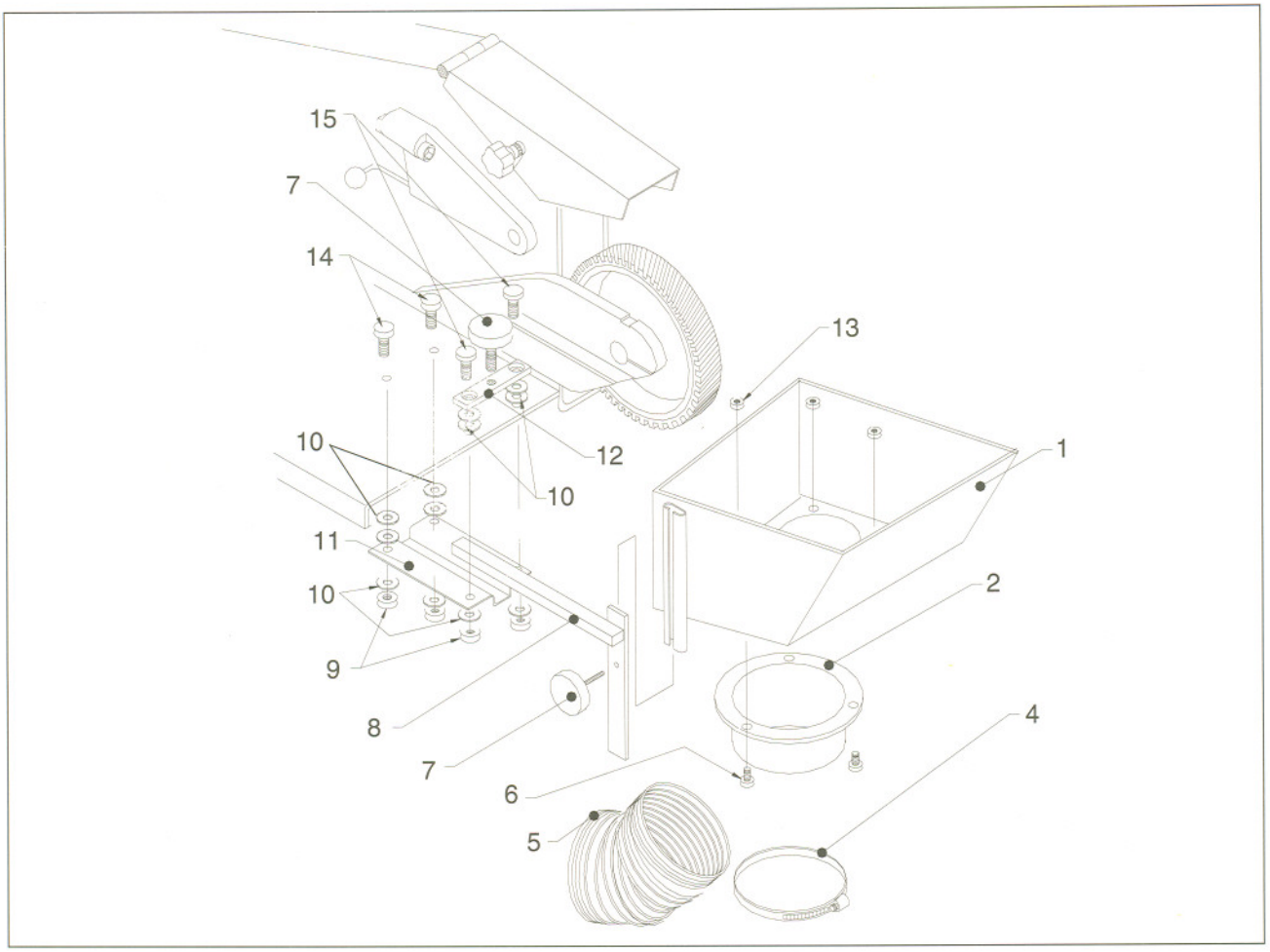
Model 4106



Model 4126AC

Vacuum Scoop Exploded View

The vacuum scoop connects the machine to the vacuum system. The mounting provisions for the scoop are shown in Figure 11. An exploded view of the scoop is also provided in Figure 11.



Ref. No.	Part Number	Description	Qty.
1	5053531	Scoop Weldment	1
2	5052470	Adapter, Hose	1
4	5507534	Clamp, Hose 3 in.	1
5	5507533	Hose, 3 x 5" x 5 ft	1
6	9128241	HHCS 10-32 x 5/8	3
7	9070361	Knob	2
8	5053571	Rail	1
9	9032961	Nut - Nylock 5/16	4
10	5507583	Washer, Nylon 5/16	12
11	5053581	Channel	1

Ref. No.	Part Number	Description	Qty.
12	5511373	Base	1
13	9056411	Nut, Hex Jam (10-32)	3
14	9062171	Screw, SHCS (5/16-18 X 7/8)	2
15	5501116	SCREW, SHCS (5/16-18 X 1-1/2)	2

Figure 11: Vacuum Scoop Exploded View

Air Cushioned Dead Head Assembly

Refer to Figures 14 and 15. The air-cushioned dead head is for use on very small radius grinding. When connected to a source of shop air (80-90 psi), the belt rides on a cushion of air to decrease head and belt wear. The dead head is easy to use, and adapts to any of the available radius tips.

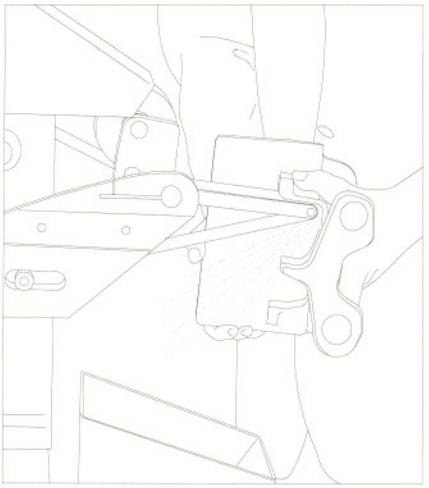
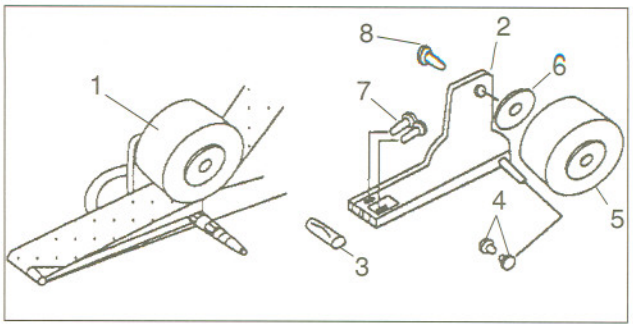


Figure 14: Internal Contouring with Air Cushioned Dead Head

Install the dead head assembly as follows:

WARNING: DISCONNECT ELECTRICAL POWER TO THE MACHINE BEFORE INSTALLING THE DEAD HEAD ASSEMBLY.

1. Lower tension lever to release belt tension.
2. Loosen clamping screw and remove platen or contact wheel.
3. Insert the shaft of the dead head assembly in head casting. Position dead head assembly with the tip parallel with the machine base. Tighten the clamping screw.
4. Install the belt under the dead head contact wheel and over the dead head tip.
5. Lift the tension lever to tighten the belt.
6. Check belt tracking.
7. Connect pressurized air supply (80-90 psi).
8. Check operation of the dead head assembly.



Ref. No.	Part Number	Description	Qty.
1	5044960	Air Cushion Dead Head Assembly (Note 1)	1
2	5044970	Casting, Dead Head	1
3	5044991	Tip, Dead Head, 3/16 R x 2	1
	5045011	Tip, Dead Head, 1/4 R x 2	1
	5045031	Tip, Dead Head, 5/16 R x 2	1
	5045051	Tip, Dead Head, 3/8 R x 2	1
4	5045071	Fitting, Flareless Compression, 1/4 x 1/8	1
5	5044610	Contact Wheel Assembly 3 x 2	1
6	5045101	Spacer	1
7	9062441	Screw, Socket Head Cap 10-32 x 1/2	2
8	9049761	Screw, Socket Head Flare	1

Note 1: Includes 3/8 R x 2 dead head tip 5045051. Other tips available at additional cost.

Figure 15: Air Cushioned Dead Head Assembly Parts Breakdown

Hub and Wheel Assembly

Refer to Figures 16 and 17. The hub and wheel assembly Small Diameter Contact Wheels can be used to adapt a number of other optional attachments for use on the belt grinder. The assembly consists of a pre-balanced hub shaft, collar, and V-belt and a special wrench to enable quick change of the optional attachments.

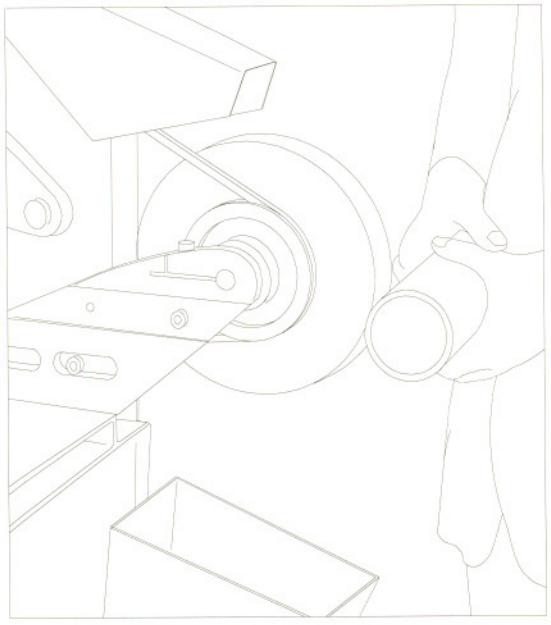
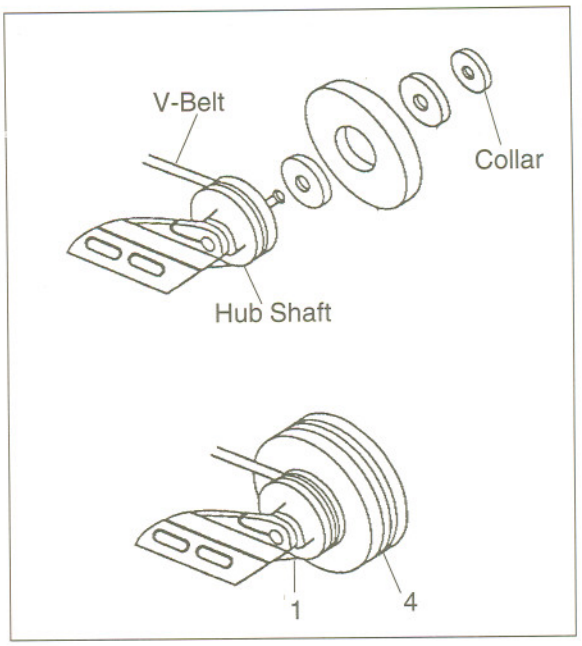


Figure 16: Polishing with Hub and Wheel Assembly



Ref. No.	Part Number	Description	Qty.
1	5054920	Hub and Wheel Assembly (Includes Hub Shaft, V-Belt, Collar, and Special Wrench)	1
2	5045141	Polishing Wheel	1
3	5058071	Spacer Plate	2
4	5044620	Buffer Pad	1

Figure 17: Hub and Wheel Assembly

Install the hub and wheel assembly as follows:

WARNING: DISCONNECT ELECTRICAL POWER TO THE MACHINE BEFORE INSTALLING THE HUB AND WHEEL ASSEMBLY.

1. Lower tension lever to release belt tension.
2. Loosen clamping screw and remove platen or contact wheel.
3. Remove work rest.
3. Insert the shaft of the hub in head casting. Tighten the clamping screw.
4. Install the V-belt around the idler wheel, drive wheel, and wheel of hub and wheel assembly.
5. Raise tension lever to tighten belt.
6. Install polishing wheel or buffing pad as follows:
   A. Install one spacer plate on threaded shaft.
   B. Install polishing wheel or buffing pad.
   C. Install second spacer plate and collar.
   D. Tighten collar using special wrench.

Small Diameter Contact Wheels

Small diameter contact wheels are useful for grinding or contouring difficult, hard to reach areas (refer to Figure 18).

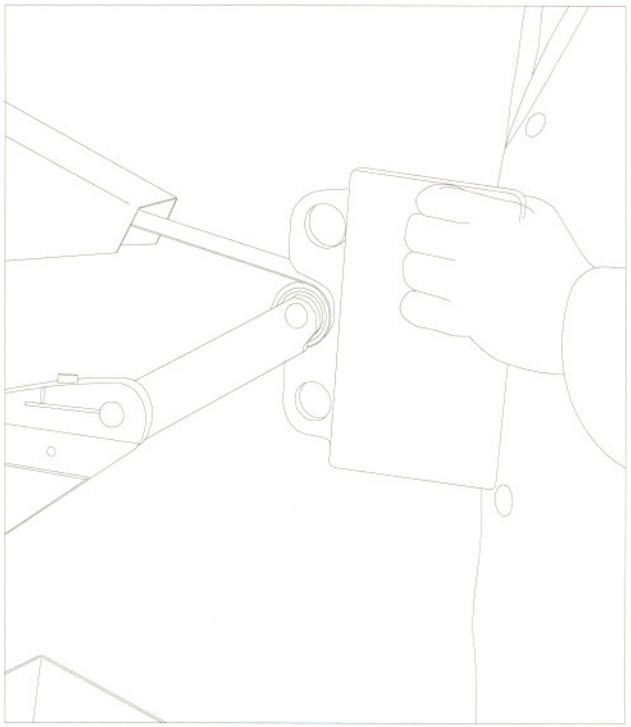


Figure 18: Contouring Using Small Diameter Contact Wheel

The small diameter contact wheels are available in several sizes. Refer to Figure 19 for a listing of small diameter contact wheels.

Dia. (In.)	Part Number	Description
1/2	5057871	Contact Wheel, 70 Duro
5/8	5057881	Contact Wheel, 70 Duro
3/4	5057891	Contact Wheel, 70 Duro
1	5057901	Contact Wheel, 70 Duro

Figure 19: Small Diameter Contact Wheels.